

## TOPIC 09 - Prevention / Epidemiology / Nutrition

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### Previously known and newly diagnosed atrial fibrillation complicating initial acute myocardial infarction : a community-wide perspective

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**Purpose:** Atrial fibrillation (AF) is an understudied entity within myocardial infarction (MI) comorbidity. AF carries an increased risk of death but whether this risk is independent of other characteristics remains controversial. Our community-based data allow us, for the first time, to study the occurrence of AF over a long period of observation after MI and determine its impact on mortality post-MI.

**Methods:** From an existing MI incident cohort (1983-2007), AF was identified by diagnostic codes for prior AF and from an ECG database for new-onset AF. Heart failure (HF) was defined by the Framingham criteria. Patients were followed from MI until death or last follow-up. Proportional hazards regression examined the association of AF with post-MI mortality.

**Results:** Among 3215 MI patients (mean age 68 y, 42% women), 303 patients (9%) had prior AF. During a mean follow-up of 7 y, 215 patients (30%) developed AF 2 days and 511 (70%) > 2 days of MI. 1639 deaths were observed and AF was associated with an increased risk of death (table).

**Conclusion:** After adjusting for MI characteristics, AF is an independent predictor of long-term mortality, irrespective of its timing. This underscores the importance of its evaluation and management after MI.

### Impact of Atrial Fibrillation on long-term Mortality in Myocardial Infarction Patients

	Prior AF		AF 2 days post-MI		AF > 2 days post-MI	
	HR (95% CI)	p-value	HR (95% CI)	p-value	HR (95% CI)	p-value
Unadjusted	3.54 (3.06,4.10)	<0.0001	2.98 (2.51,3.53)	<0.0001	4.29 (3.77,4.89)	<0.0001
Adjusted for age, sex and comorbidity	1.68 (1.44,1.95)	<0.0001	1.80 (1.51,2.14)	<0.0001	2.86 (2.51,3.26)	<0.0001
Adjusted for age, sex, comorbidity and HF	1.46 (1.26,1.70)	<0.0001	1.60 (1.34,1.90)	<0.0001	2.30 (2.01,2.63)	<0.0001

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### Increased hospital mortality in HIV-infected patients with acute coronary or cerebrovascular syndromes. Analysis from a French nationwide hospital medical information database.

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**Background:** After more than two decades of the AIDS epidemic, the spectrum of HIV-associated vascular diseases has considerably evolved from infectious disease with improved survival, to premature atherosclerosis. As a consequence, acute atherosclerosis complications, such as acute coronary and cerebrovascular syndromes (ACS and CVS) are currently growing. However, only few data are available on HIV-infected patients in the setting of ACS/ CVS. The aim of the present study was to determine the prevalence of HIV,

as well as the characteristics and hospital case fatality of HIV-infected patients with CVS and ACS.

**Methods:** From the French nationwide hospital medical information database, data from all the consecutive patients hospitalized in the 1546 French hospital/clinics for CVS and/or ACS from 1<sup>st</sup> January 2005 to 31<sup>st</sup> December 2008 were analysed.

**Findings:** Among the 1.189.043 patients included, the prevalence of HIV infection was similar in CVS (0.21%) and ACS (0.19) patients (p=0.0897). HIV patients were younger, and more frequently male.

When compared to HIV-uninfected patients, case fatality was markedly increased in HIV-infected patients after either CVS (OR (95%CI): 1.73(1.45-2.06)) or ACS (OR (95%CI): 1.37(1.01-1.86)), even after adjustment for sex and age or sex, age, and STEMI, respectively.

**Conclusion:** The management of HIV infection is now focusing on long-term follow-up over decades. HIV infection is associated with dramatically worse hospital prognosis for both ACS and CVS. It is therefore evident that in HIV-infected patients, vascular disease should remain a focus for clinical and basic research not only for prevention, but also with regard to acute atherosclerosis-related complications.

	HIV -uninfected n=1161124	HIV Infected n=2356	P
CVS	636728 (99.79%)	1333 (0.21%)	<0.0001
Age (years, mean ± SD)	72.4 ± 14.9	49.5 ± 12.0	<0.0001
Men	50.0 %	73.1 %	<0.0001
Case fatality	12.2 %	11.1 %	=0.2351
ACS	524396(99.81%)	1023(0.19%)	<0.0001
Age (years, mean ± SD)	68.9 ± 14.1	51.7 ± 10.7	<0.0001
Men	65.4 %	89.3 %	<0.0001
STEMI	42.9 %	57.6 %	<0.0001
Case fatality	6.6 %	4.4 %	=0.0041